DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Indian Health Service
Rockville, Maryland 20857 Refer to: OHP, OEHE

INDIAN HEALTH SERVICE CIRCULAR NO. 92-4

BLOODBORNE PATHOGEN EXPOSURE POLICY

Sec.

1. PURPOSE. To establish responsibilities and procedures for protecting patients and personnel from bloodborne pathogens, e.g., human . immunodeficiency virus, hepatitis B virus or other pathogens transmitted through cantact with blood and body fluids.

2. OBJECTIVES.

A. To prevent the transmission of bloodborne pathogens from infected patients or visitors to healthcare workers..

B. To protect Indian Health Service (IHS) patients and visitors to IHS healthcare facilities, from being infected by bloodborne pathogens.

C. To comply with Occupational Health and Safety Administration (OSHA) regulations at Title 29 of the Code of Federal Regulations, Subsection 1910.1030 (29 CFR, 1910.1030).

3 SCOPE. This circular applies to all IHS employees, including those assigned to Public Law (P.L) 93-638 facilities. The law and implementing regulations apply to Indian Self-Determination Act, P.L. 93-638 and to Title V urban program contractors as employers. Tribal contractors are strongly encouraged to adopt this circular.

4. DEFINITIONS.

Blood -- means human-blood, human blood components, and blood products made from human blood

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Bloodborne Pathogens -- means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Body Substance Isolation -- is an infection control system where all body substances are considered to be potentially infectious. It is equivalent to Universal Precautions.

Clinical Laboratory -- means a workplace where diagnostic or other screening procedures are performed on' blood or other potentially infectious materials.

Contaminated -- means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry -- means laundry or linen which has been Soiled with blood or other potentially infectious materials or may contain sharps.

Contaminated Sharps -- means any contaminated object that can penetrate the skin including, but not limited to needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination -- is a physical or chemical process to remove,, inactivate, or destroy pathogens on a surface or item so that they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal.

Engineering Controls -- means controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident -- means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Bandwashing Facility -- means a facility providing an adequate supply of tempered running potable water, soap and single use towels or hot air drying machines.

HBV -- means hepatitis B virus.

Healthcare Professional -- means a physician or other licensed healthcare provider authorized to accomplish the evaluation procedures described in this policy, e.g., a registered nurse could be authorized to perform the required evaluation.

HIV --- means 'human immunodeficiency virus Type-1. Unless it is stated otherwise, all reference to HIV means HIV-l.

IHS Facility -- means any IHS healthcare facility. All contract facilities operated by a tribal organization under P.L. 93-638, "Indian Self-Determination and Education Assistance: Act" or Urban -Indian Health Centers are encouraged to adopt this IHS policy or shall develop equivalent policies which meet the minimum requirements of 29 CFR, 1910.1030.

Occupational Exposure -- means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Other Potentially Infectious Materials -- means:'

(A)- The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, urine (because of cytomegalovirus) any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;

(B) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and

(Cl The HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions.

Parenteral -- means piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

Personal Protective Equipment -- is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g. uniforms, pants, skirts, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Regulated Waste -- means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Source Individual -- means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee, Examples "include, but are not limited to hospital and clinic patients trauma victims, clients of drug and alcohol treatment facilities, and human remains..

Sterilize -- means the use of a physical or chemical, procedure to destroy all microbial life including highly resistant bacterial endospores.

Universal Precautions -- is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens. In the IHS, Body Substance Isolation may be used in place of Universal Precautions.

Work Practice Controls -- means controls that reduce the likelihood of exposure blood or body fluids by eliminating a task or altering-the manner in which a task is performed (e.g., prohibiting recapping of needles by two-handed technique).

5. RESPONSIBILITIES.

A. Headquarters Technical Consultant on Bloodborne Pathogens. The Associate Director, Office of Health Programs (OHP), or designee, shall be the IHS technical consultant for the control of exposure to bloodborne pathogens.

B. Area Technical Consultant on Bloodborne Pathogens. The Area Chief Medical Officer (CM0) or designee, shall be the technical consultant for the service unit or P.L. 93-638 Program. He/She shall act as consultant for the implementation of exposure control plans and other aspects of this policy.

C. The Service Unit or P.L. 93-638 Program Director. He/she shall assume responsibility for the implementation of the requirements of 29 CFR 1910.1030 at the local level.

6. EXPOSURE CONTROL PLAN. All IHS facilities and those operated by a tribal organization under P.L. 93-638 and urban Indian health centers shall have an Exposure Control Plan in accordance with 29 CFR, Subsection 1910.1030 (c) . See Appendix B for an example of a healthcare facility Exposure Control Plan.

The Exposure Control Plan shall identify job classifications and tasks in which occupational exposure may occur. Each IHS facility shall have departmental policies and procedures that cover tasks in which an occupational exposure may occur. The procedures shall enumerate the correct steps to follow while performing such tasks to minimize any occupational exposure and to prevent contaminating other equipment or surfaces.

Methods of compliance shall be based on Body Substance Isolation or Universal Precautions to prevent contact with blood or other potentially infectious materials. Engineering and work practice controls shall be used to eliminate or minimize employee exposure: Where a potential occupational exposure remains after applying controls, then personal protective equipment shall be used.

(1) Handwashing facilities shall be readily accessible to employees. All personnel shall wash their hands and other, skin with soap and water, or flush mucous membranes with water immediately or as soon as possible following contact of such body areas with blood or other potentially infectious materials.

Contaminated needles and other contaminated sharps shall not be bent, cut, recapped or removed except as specified in Appendix B.

(3) Contaminated sharps shall be placed in appropriate puncture resistant, leak-proof containers, as specified in Appendix B, until properly reprocessed or disposed. Contaminated sharps containers shall be easily accessible to employees.

(4) Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is reasonable likelihood of -occupational exposure.

(5) Food and drink shall not be, kept in refrigerators, freezers, shelves, cabinets or on counter tops or bench tops where blood or other potentially infectious materials are present.

Specimens shall not be placed where medications are prepared or stored.

(6) All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, splattering, and generation of droplets 'of these substances.

B. Personal Protective Equipment (PPE).

(1) When a potential occupational exposure exists, the IHS facility administration shall provide, at no cost to the employee, appropriate PPE.

(2) Employees shall use appropriate PPE when the potential exists for occupational exposure.

(3) Appropriate PPE, as specified in Appendix B, shall be readily accessible at the worksite or issued to employees and shall be worn by employees.

(4) The IHS facility shall clean; launder, and dispose of PPE at no cost to the employee."

(51 The IHS facility shall repair or replace PPE as needed to maintain its effectiveness, at no cost to the employee.

(6) If a PPE is penetrated by blood or other potentially infectious materials the equipment shall be removed as soon as possible.

(7) All PPE shall be removed prior to leaving the work area.

(8) When PPE is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

C. .Housekeeping, Laundry and Instrument Reprocessing.

(1) IHS facilities shall be maintained in a clean and sanitary condition.

(2) Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

All new hospital construction and renovation shall be designed and equipped to isolate or eliminate hazards associated with reprocessing of contaminated instruments.

(31 Disposable contaminated sharps shall be discarded immediately in containers that are closable, puncture resistant, leak proof on sides and bottom and labeled or color coded.

(4) Other regulated waste shall be placed in containers which are closable, constructed to contain all contents and prevent leakage of fluids during handling, storage, transportation or shipping. The waste must be labeled or color coded and closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

Note: Disposal of all regulated waste shall be in accordance with applicable Federal or State regulations.

(5) Contaminated laundry shall be handled as little as possible to eliminate airborne contamination. Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

(61 Laundry facilities shall be designed and operated to minimize occupational exposure and to ensure destruction or removal of all pathogenic agents. Refer to the IHS Health. Facility Planning Manual and the Indian Health Manual Part 5, Chapter 10, Housekeeping, for additional information.

D. Hepatitis B Vaccination and Post Exposure Evaluation and Follow-up.

(1) General. Hepatitis B vaccination series shall be offered within 10 working days to all employees who have occupational exposure, and post-exposure evaluation and follow-up for employees who have had an exposure incident, at no cost to the employee.

All employees who 'are offered and decline to accept hepatitis B vaccination shall sign a statement indicating their refusal. A copy of the required statement is located in Appendix A.

If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the hepatitis B vaccination shall be made available at that time.

If a routine booster dose of hepatitis B vaccine is recommended by the United States Public Health Service at a future date, such booster doses shall be made available.

(2) Post-exposure Evaluation and Follow-up. All incidents involving occupational exposure shall be reported, investigated, and documented in accordance with the Indian Health Manual, Part 1, Chapter 9, Occupational Health and Safety Program Management. Following *a* report of an exposure incident, a confidential medical evaluation and follow-up, shall be made immediately available to the exposed employee.

(3) Healthcare Professional's Written Opinion. The employee shall be provided with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation. The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether vaccination is indicated for an employee, and if the employee has received such vaccination.

The healthcare-professional's opinion for post-exposure evaluation and follow up is described in Appendix .

E . Communication of hazards to 'employees.

(1) Labels and siqns.

(a) Biohazard labels shall be affixed to containers of regulated waste, refrigerators, and freezers containing blood or other potentially infectious materials; and other containers used to store, transport or ship blood or other potentially infectious materials.

(b) The Universal Biohazard 'Symbol shall be used. The symbol is fluorescent orange or orange-red. The background may be any color that provides sufficient contrast to be clearly defined.

(cl Red bags or containers may be substituted for labels. However, regulated wastes must be handled in accordance with rules and regulations of the organization having jurisdiction.

(d) Blood products that have been released for transfusion or other clinical use are exempted from these . labelling requirements.

(2) Information and Training.

(a) Training shall be provided at the time of assignment to tasks where occupational exposure may occur, and it shall be repeated annually. It shall be tailored to the educational and language level of the employee, and offered during the normal work shift. The training must be interactive and cover the information described in Appendix B.

(bl Employees who have received training on bloodborne pathogens in the year preceding the effective date of this policy shall only receive training in provisions of the policy that were not covered.

(cl Additional training shall be provided to employees when any changes of tasks or procedures affect the employee's occupational exposure.

(d) The person conducting the training shall be knowledgeable in the subject matter.

(e) The use of a test to assess employee comprehension of subject matter is recommended.

F. Record keeping.

(1) Medical Records. Medical records shall be maintained in accordance with 29 CFR, 1910.20. These records shall be kept confidential, be maintained for at least the duration of employment plus 30 years.

(2) Training Records. Training records shall be maintained for 3 years and shall include the information described in Appendix B.

(3) Availability. All employee records shall be made available to the Assistant Secretary of Labor for the OSHA and the Director of the National Institute for Occupational Safety and Health (NIOSH) upon request.

All employee records shall be made available to the employee in accordance with 29 CFR, 1910.20,

(4) Transfer of Records. If the IHS facility is permanently closed or there is no successor employer to receive and retain the records for the prescribed period, the Director of the NIOSH shall be contacted for final disposition.'

G. Exposure Control Plan Update. The facility Exposure Control Plan shall be reviewed on an annual basis and revised as necessary.

7. SUPERSESSION. This is a new circular. It modifies and supplements the Indian Health Manual, Part 1, Chapter 12, IHS Employee Immunization Program, D. Procedures, 2. Additional Important Protection for Employees. b. Hepatitis B.

for Everett R. Rhoades, M.D.
Assistant Surgeon General
Director

(05/15/92)

APPENDIX A

HEPATITIS B VACCINE DECLINATION

I understand that because of my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

I have read, discussed and understand the potential risks associated with declining the vaccine.

_____
Employee's Name (Typed or Printed)

_____ _____
Employee's Signature Date

_____ _____
Witness's Signature Date

Circular No: 92-4 Appendix B

(05/15/92)

APPENDIX B

EXPOSURE CONTROL PLAN.

_____

facility name

(Please note: This Exposure Control Plan applies to *all* Indian Health Services (IHS) employees, including those assigned to Public Law (P.L.) 93-638 facilities. The law and implementing regulations apply to Indian Self-Determination Act, P.L. 93-638 and to Title V urban program contractors as employers. Tribal contractors are strongly encouraged to adopt this plan.)

I. Purpose :

The purpose of the _____ Exposure Control Plan is to eliminate or minimize employee occupational *exposure* to blood or body fluids.

II. Background:

Hepatitis B virus (ABV) ha's long been known to cause serious disease in susceptible individuals. The agent that causes the Acquired Immune Deficiency Syndrome (AIDS), the human immunodeficiency virus (HIV) has been discovered only relatively recently.

These and other bloodborne pathogens present occupational risks to healthcare providers. In September 1986, several unions representing hospital and healthcare employees petitioned the Occupational Safety and Health Administration (OSHA) to take action to reduce the risk of exposure. The petition was denied; however, in October 30, 1986, the Departments of Labor and Health and Human Services published a Joint Advisory Notice entitled, "Protection Against Occupational Exposure to Hepatitis B Virus and Human Immunodeficiency Virus. Then on November 27, 1987, OSHA announced its intent to initiate rulemaking to reduce occupational exposure to HBV and HIV. After a comment period, OSHA published a Notice of Proposed Rulemaking on May 30, 1989.

The OSHA made a preliminary determination that certain employees faced a significant risk of exposure to bloodborne pathogens, and that a variety of control measures could reduce this risk, The final rule cited in Title 29 of the Code of Federal Regulations, Subsection 1910.1030 (29 CFR 1910.1030) was issued on December 6, 1991, after a lengthy review that included an assessment of the economic feasibility of the standard.

III. Health Effects:.

There are a number of pathogenic agents that may cause a bloodborne infection. These infections may result from exposure to blood or body fluids and tissues. Needle stick injuries are of special concern in the healthcare setting. Some of the more important agents are described below:

Hepatitis

Hepatitis means inflammation of the liver and can be caused by chemicals, autoimmune disease, and infectious agents including viruses. Four major types of viral hepatitis have been identified. Hepatitis A virus (HAV), formerly called "infectious" hepatitis is spread primarily by the fecal/oral route. It is not generally considered.to be a nosocomial agent, **i.e., *a*** problem in health facilities. The HBV, formerly called "serum" hepatitis is a major risk to healthcare workers, and is-discussed later. Non-A, non-B hepatitis is caused by viral agents other than HAV and HBV. Two types have been identified. Hepatitis .C virus (HCV) that is parenterally spread (by direct inoculation through the skin), and hepatitis E virus (HEW which is spread by the fecal/oral route. There are occasional reports of HCV transmission to healthcare workers, and this virus is discussed further in this document.

HBV

The Hepatitis Branch of the Centers for Disease Control (CDC) estimates there are approximately 8,700 HBV infections in healthcare workers with occupational exposure in the United States (U.S.) each year. These infections result in over 2,100 acute cases of clinical hepatitis, 400-440 hospitalizations, and approximately 200 deaths each year in healthcare workers. Death may be the result of both acute and chronic infections, and there is the potential that infected workers may spread the disease to family members.

A. Biology

HBV attacks and replicates in liver cells. The inner core contains deoxyribonucleic acid (DNA), enzymes and various proteins, including core antigen (HBcAg) and e antigen (HBeAg). The outer shell contains a lipoprotein called hepatitis B surface antigen (HBsAg), formerly called Australia Antigen. The HBV vaccine is derived from HBsAg particles which are immunogenic but not infectious. There is a readily available test for HBsAg, and its presence in the blood indicates that the individual is currently infected with the HBV.

-8. Disease Outcomes

When an infection occurs, the body produces antibodies against HBsAg (anti-HBs). The production of antibodies coincides with the destruction of liver cells containing the virus. Individuals who eliminate the virus also develop an antibody against HBcAg (anti-HBc) . Both antibodies can usually be detected in the blood for life.

There are two types of response to HBV infection, acute and chronic, In the first response,, the destruction of the virus in the liver may lead to acute clinically apparent hepatitis B. About one third of cases are asymptomatic, one third have a mild "flu-like" illness which is usually not diagnosed as hepatitis, and one third have severe disease with jaundice, dark urine, extreme fatigue, anorexia, nausea, abdominal pain, and sometimes joint pain, rash, and--fever. Approximately 20 percent of these severe cases require hospitalization. A fulminant hepatitis, which is 85 percent fatal,. develops in about l-2 percent of cases.

The second type of response - the development of chronic HBV infection occurs in about 6-10 percent of newly infected adults These individuals can not clear the virus from their liver cells and become chronic carriers, usually for life. They do not develop anti-HBs, but do produce anti-HBc. About 25 percent of carriers develop chronic active hepatitis, This progressively debilitating disease often leads to cirrhosis of the liver after 5-10 years.

The DNA of HBV in chronic carriers can integrate into the DNA of the host liver cell. This integration may lead to a malignant transformation of the liver cell, and development of a fatal primary hepatocellular carcinoma (PHC). Patients with this disease usually die within 4-6 months after diagnosis. The PHC usually develops in chronic carriers after a latency period of 20-60 years. There is a higher risk of developing PHC if infection occurs perinatally (from mother to child) or from infections during childhood.

C. Modes of Transmission and Epidemiology

The HBV may be spread in the workplace parenterally or by contact with mucous membranes, especially the eye or mouth. The most efficient mode of transmission is direct inoculation, such as might occur from a needle stick. One milliliter of blood may contain up to one million infective doses of virus. Therefore, exposure to extremely small amounts of inocula may cause infection. Blood and blood-derived body fluids have the highest concentration of viruses. Other body fluids such *as* urine and feces contain only small amounts of virus unless blood is present. Studies have shown that 7 percent

to 30 percent of susceptible healthcare workers sustaining needle stick injuries from HBsAg positive patients became infected if they did not receive post exposure prophylaxis. Direct inoculation **may** also occur when the worker has preexisting lesions on the hands or dermatitis.

'Experimental animals have been infected with HBV by placing infected sera in contact with the eyes and mouth. Therefore, splashes of blood or serum into an individual's eye or mouth in a clinical setting **must** be regarded as a potentially serious exposure. There has been concern about the infectivity 'of aerosols generated by medical, dental, and laboratory equipment; however, the potential for HBV transmission from inhalation is not known.

The HBV infection is **not** uniformly distributed in the U.S. populations. Certain areas such as parts of Alaska and the U.S. Trust Territories have a higher prevalence of HBV carriers. Also, certain ethnic and racial groups such as foreign born Asians have **a** high prevalence of HBsAg antibody. Studies have revealed that workers exposed to blood on the job had a prevalence of HBV markers several **times** higher than that of non-exposed workers and the general public. Persons working in operating rooms, emergency rooms, labs, and dialysis units were shown to be especially at risk.

Healthcare workers **may** take extraordinary care when dealing with known carriers, but they are often unaware that they **may see** five . carriers for each one that is recognized. This is the **key** point in utilizing Universal Precautions and for the use of the vaccine. While the risk of infection is greatest in inner city referral hospitals, the risk will be present in any setting were blood exposure **may** occur.

The IHS must also be concerned about transmission from healthcare workers to patients. A guideline from the CDC on "Recommendations for Preventing Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Patients During Exposure-Prone Procedures," is one source of information.

Transmission via the environment of HBV infection is also a concern because **the** virus can survive for at least 1 week in dried blood at room temperature. Improper disinfection and sterilization of medical and dental devices is a major concern, Any high level disinfecting or sterilizing solution will kill **the** virus if used properly.

D. Hepatitis B (HB)Vaccine

A safe and effective hepatitis, B vaccine derived from human plasma was licensed in 1982. A second vaccine produced using recombinant technology was licensed in 1987. The OSUA estimates that over

I 2 millon healthcare workers in the U.S. have been vaccinated The HB vaccination is the most important part of the HBV control program because personal protective equipment can not, completely prevent , needle stick and other exposures.

The currently licensed HB vaccines are given intramuscularly in the deltoid, in three doses over a 6 month period. The vaccines when. given according to the manufacturers directions, induce protective antibody levels in 85-97 percent of healthy adults.

E. Post-exposure Prophylaxis

Pre-exposure vaccination is the most effective means of preventing HBV infection. However, some individuals will initially decline the vaccine. Fortunately, post-exposure prophylaxis exists for HBV exposures. The February 9, 1990, or most recent redommendations of the Immunization Practices Advisory Committee (IPAC) shall be followed. This generally entails the use of hepatitis B immunoglobulin (HBIG) and the vaccination series.

Non-h, Non-B Hepatitis

Non-h, non-B hepatitis is caused by more than one viral agent HBV accounts for 20-40 percent of acute viral hepatitis in the U.S. and has epidemiologic characteristics similar to HBV. An immunoassay test *was* developed to detect antibodies to HCV in May 1990. There is not enouqh data at present to determine the significance of HBV infection in healthcare settings, However, since the principle mode of transmission for this virus is bloodborne, the potential for occupational exposure exists.

Human Immunodeficiency Virus (HIV)

In June 1981, the first cases were reported in the U.S. of what was to become known as Acquired Immunodeficiency Syndrome (AIDS). Investigators described unusual illnesses characterized by Pneumocystis carinii pneumonia (PCP) and Kaposi's sarcoma (KS) that developed in young homosexual men without known causation.

By early 1982, 159 AIDS cases had been identified. All but one were men and over 92 percent were homosexual or bisexual. *As* the epidemic progressed, cases of AIDS were being reported in children, intravenous (IV) drug abusers, blood transfusion recipients, hemophilia patients Haitians, female sexual partners of male IV drug abusers, Africans, and other heterosexual contacts.

During 1983 and 1984; French and American scientists isolated a human virus associated with AIDS. Eventually the virus became known as HIV-L.

The CDC estimates there are between l-l.5 million persons infected with HIV. As of July l991#, there awere 186,895 cases. reported to the CDC The USPHS estimates that by the end of 1992 there will be more than 365,000 caSes AIDS in the U.S. with 80,000 new cases diagnosed each year. It is estimated that a total of 172,000 AIDS patients will require medical care in 1992.

Of greater importance to healthcare workers are the l-l.5 million persons infected with HIV, often unknowingly so, and who may require medical care. There are reports of at least 30 healthcare, workers who have been infected as the result of occupational exposure. Unless effective preventive measures are enforced, this number will continue to grow.

A. HIV: Biology

The. HIV is a member of a group of viruses known as retroviruses. Its genetic core material is ribonucleic acid (RNA) and enzymes surrounded by an envelop of lipids and proteins.

All Viruses must reproduce intracellularly. The HIV replicates in human macrophages and IT lymphocytes, two types of cells that are vital to the immune system. The HIV particles bind to the cells at CD4 receptor sites. Once bound, the HIV particle releases its RNA to begin the replication process.

Circulating macrophages play a role in transporting the virus throughout the body. They may actually transport HIV to the brain, leading to neurologic complications.

B. HIV: Serological Testing

A test for detecting the presence of HIV antibodies was first licensed in 1985. Although the antibodies do not appear to defend the body against HIV, they serve as markers of viral infection. Most people infected with HIV have detectable antibodies within 6 months, with the majority generating antibodies between 6-12 weeks after exposure.

The enzyme-linked immunosorbent assay (ELISA) technique used to detect HIV antibodies is sensitive, but may produce a false positive result. Current recommendation is to repeat a positive ELISA and if the second test is also positive, use the Western Blot technique to validate results. A new test called the polymerase chain reaction (PCR) technique is under development. This test **may** detect HIV earlier than currently available tests.

C HIV:-Clinical Manifestations of Disease.

HIV adversely affects the immune system, rendering the individual vulnerable to a wide range of clinical disorders. These conditions are difficult to treat, tend to recur, and usually lead to death in the infected individual. The CDC describes the disease progression in the following stages:

Group I: The first clinical evidence of HIV infection may be acute retroviral syndrome within a month of exposure. This is a mononucleosis-like syndrome that may include fever, lymphadenopathy, myalgia, arthralgia, diarrhea, fatigue, and rash. The syndrome is self-limiting and usually results in the development of antibodies.

Group II: Most of these individuals are asymptomatic for months to years following infection. However, they can transmit the virus to' others throughout this time.

Group III: Some HIV infected patients will develop a persistent, generalized lymphadenopathy (PGL) that lasts more than 3 months.

Group IV: Epidemiologic data indicates that most persons who are infected with HIV will eventually develop AIDS. AIDS can result in severe opportunistic infections that individuals-with normal immune systems would rarely experience, as well as, a wide range of neurologic and oncogenic or neoplastic processes. The neurologic effects range from apathy to severe dementia.

According to CDC's case definition, there are specific diseases that are considered indicators of AIDS. The most common cause of infection and death is the parasite Pneumocystis carinii. Also important are fungal diseases such as candidiasis, viral diseases such as cytomegalovirus, cancer/neoplastic diseases such as Kaposi's sarcoma, and bacterial infections such as Mycobacterium avium and disseminated Mycobacterium tuberculosis.

AIDS is primarily managed by treating symptoms. At this time, only one antiviral drug, Zidovudine or Retrovir TM, (formerly known as AZT) has been approved by the Food and Drug Administration for some patients.

D. HIV: Transmission

While HIV has been isolated from many human sources, epidemiologic evidence implicates only blood, semen, vaginal secretions, and breast milk in the transmission of the virus.

HIV is not transmitted by casual contact. Studies have shown that it is not transmitted by mosquitoes or other animals.

The factors that contribute to HIV transmission include the susceptibility of the host , the virulence of the 'particular, strain,. the stage of infection of the source, and the size of the inoculum. This last factor appears to be extremely significant in 'the' transmission of this virus. ,

E. HIV: Epidemiology

Several prospective studies are currently underway following large I/ cohorts of healthcare workers with exposure to HIV-contaminated blood. One study reported a seroprevalence rate of 4/860 or 0.47 percent for individuals who had sustained either a needle stick or a cut with a sharp instrument. Another study reported similar results with a seroconversion rate of .1/212 or 0.47 percent.

Human Immunodeficiencv Virus Type-2.

Although there have been only a few cases of HIV-2 reported in the U-S., the infection is endemic in West Africa. Unfortunately, there is.much to be-learned about the epidemiology, pathogenesis, and efficiency of transmission of this virus:

Other Bloodborne Pathogens

Syphilis is caused by the acterial spirochete Treponema pallidum. Although syphilis is primarily spread sexually and in utero, a few cases of ransmission by needle stick have been documented. Preventive treatment of an exposed worker with an antibiotic during the incubation period would be expected to prevent serological test positivity and the manifestations of infection.

Malaria, a potentially fatal mosquito-borne parasitic infection of the blood cells, is characterized by fever, chills, and anemia. Malaria has also been transmitted from a contaminated needle stick. It is highly unlikely that this disease will be seen in most IHS facilities.

Babesiosis is a tick-borne parasite disease similar to malaria caused by the parasite Babesia microti. It is endemic in certain islands off the coast of northeastern U.S. It has been transmitted by transfusion of fresh blood from asymptomatic donors.

BruceZlosis is a febrile illness caused by members of the bacterial genus Brucella. This disease is normally associated with occupational exposure to livestock or from drinking unpasteurized milk. However, it has also been transmitted from blood transfusion.

Cytomegalovirus (CMV), a generalize viral infection, especially involving the central nervous system and liver. This disease was not included in the OSHA standard, since the most severe form of disease affects

neonates, following congenital infection. However, it is of sufficient concern that the IHS recommends appropriate steps be taken to prevent its spread. Transmission occurs because of mucosal contact with 'infectious materials, e.g., urine, saliva, breast milk, cervical secretions and semen. Viremia may be present in asymptomatic persons,,, and CMV is the most common cause of post-transfusion mononucleosis.

Leptospirosis, a prolonged illness characterized by fever, rash, and occasionally jaundice, is caused by strains of Leptospira interrogans, a spirochete. It is typically acquired by contact with infected animal urine. No nosocomial transmission has been documented.

Arboviral infections generally do not lead to high levels of viremia in humans, with the exception of Colorado Tick Fever (CTF), a tick-borne virus that has been spread by blood transfusions.'

Relapsing fever is a rare disease ,caused by pathogenic Borrelia, transmitted by lice or ticks and characterized by recyrring febrile episodes separated by periods of relative well-being. The disease has been diagnosed on the Navajo Reservation. Occupational transmission from blood splash has been documented.

Creutzfeldt-Jakob disease (CJD), a rare disease with world-wide distribution, is a degenerative disease of the brain caused by a virus. It is believed that transmission occurs by ingestion or inoculation with infective material, primarily neural tissue. No cases of nosocomial transmission from blood have been documented; however it has been spread from homologous dura matter implants, receipt of human growth hormone, and the insertion of unsterilized stereotactic electrodes into the brains of CJD patients then used on others. Also, a case has been confirmed ou autopsy in a neuropathology. histopathology technician. It is not known how she became infected; however, it is known that during her tenure, two CJD patients had been autopsied.

Human T-lymphotropic Virus Type I (HTLV-I) , the first retrovirus to be identified, is found in the U.S. mainly in intravenous drug users. The HTLV-I has been associated with a hematologic malignancy known as adult T-cell leukemia/lymphoma and with a degenerative neurologic disease known as tropical spastic paraparesis or HTLV-I associated myelopathy. There is some evidence that the virus has been spread by blood transfusion. No occupational acquisition of HTLV-I has been documented.

Viral hemorrhagic fever refers to severe, often fatal illnesses caused by several viruses not indigenous to the U.S. These illnesses are characterized by fever, sore throat, cough, chest pain, vomiting, and in severe cases hemorrhage, encephalopathy and death. Only the agents of Lassa, Marburg, Ebola, and Crimean-Congo hemorrhagic fevers are known to have caused significant outbreaks of disease with person-to-person transmission. It is extremely unlikely that any patients with these diseases would be seen at an IHS facility.

IV. Exposure Determination:

_____: has the following job classifications with an occupational exposure to bloodborne .pathogens:

(Some examples are:)
Physicians'
Dentists
Laboratorians
Nurses
Dental Assistants
Dental Hygienists
Physical Therapists
Respiratory Therapists '
Tribal Emergency Medical Technicians

The _____ has the following job classifications in which employees within a department have some occupational exposure to bloodborne pathogens:

(Some examples include:)
Tribal Community Health Representatives
Pharmacists
Public Health, Nurses
Housekeeping Staff
Maintenance Staff

Employees at the _____ may be expected to perform the following related tasks which may present an occupational exposure:

Healthcare providers - any invasive procedure
cardiopulmonary resuscitation
any procedure generating aerosols containing blood, e.g., dental burrs, orthopedic saws, drills

Nursing - cleaning contaminated instruments or equipment
- cleaning environmental surfaces
- dressing changes, suctioning

Dental Assistant - assist Dentist during intraoral procedures
- cleaning contaminated instruments
- cleaning environmental surfaces

Dental Hygienist - cleaning teeth

Pathologist - handling human tissues

Laboratorians - performs phlebotomy
handles blood and serum specimens during analysis
-cleans blood contaminated equipment or surfaces

'Housekeeping - collection of refuse or soiled laundry
- cleaning blood or body fluid spills

Maintenance - cleaning medical or dental vacuum traps

Methods of Implementation:

A. General

The _____ shall use Body Substance Isolation or Universal Precautions-(Pick one).as the method of preventing occupational exposure to blood or potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

B. Engineering and Work Practice Controls

The _____ shall use engineering or work practice controls to eliminate exposures. Where occupational exposure remains, PPE shall also be used.

1. Engineering controls shall be examined and maintained or replaced to ensure their effectiveness. The engineering controls will be evaluated during the regularly scheduled hazard surveys.

2. Handwashing facilities shall be made readily accessible to employees. When handwashing facilities are not available the _____ shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic towelettes are used, hands shall be washed with soap and running water as soon as possible.

3. Supervisors shall ensure that personnel wash their hands and other skin with soap and water, or flush mucous membranes with water immediately or as soon as possible following contact of such body areas with blood or other potentially infectious materials.

4. Contaminated needles and other contaminated sharps shall not be bent, 'recapped or removed unless the supervisor can demonstrate that no alternative is feasible or that such action is required by a specific medical procedure., Recapping shall only be accomplished using a mechanical device or by using a one handed" technique.

5. Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be puncture resistant, leak-proof on the sides and bottom, and labeled or color-coded.

6. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is reasonable likelihood of occupational exposure;

7. Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on counter tops or bench tops where blood or other potentially infectious materials are present.

   Specimens shall not be placed where medications are prepared or stored.

8. All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, splattering, and generation of droplets of these substances.

9. Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

10. Specimens of blood or other potentially infectious materials shall be placed in a container that prevents leakage during collection, handling, processing, storage, transportation, or shipping. The container for storage, transportation, or shipping shall be labeled or color-coded and closed prior to being stored, transported or shipped.

    Please note: If your facility utilizes Body Substance Isolation or Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary, provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color coding is required when such specimen/containers leave the facility. If outside contamination of the primary container occurs, the primary container shall be placed within

a second container that prevents leakage during handling, processing, storage, transport, or 'shipping and is labeled or color-coded. If' the specimen can puncture the primary container, the primary container shall be placed within a secondary container that is puncture-resistant in addition to the above characteristics.

11. Equipment that may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the supervisor can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

A readily observable label shall be attached to the equipment stating which portions remain contaminated. The supervisor shall ensure that this information is conveyed to all affectod employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

C, Personal Protective Equipment

1. Provision

The _____ shall provide, to all occupationally exposed employees at no cost, appropriate Personal Protective Equipment (PPE) such as, but not limited to, gloves, gowns, 'laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, *or* other ventilation devices. The PPE will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth ,or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

2. Use.

The supervisor shall ensure that the employee uses appropriate PPE unless the supervisor shows that the employee temporarily and briefly declined to use PPE when under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of healthcare or posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgement, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

Employees failing to use PPE when required shall be disciplined through the Employee Personnel Management System or the Commissioned Officers Effectiveness Report system.

3. Accessibility

The supervisor shall ensure that appropriate PPE in the appropriate sizes is readily accessible at the work site or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other 'similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

4. Cleaning,, Laundering, and Disposal

The_____ shall clean; launder, and dispose of PPE at no cost to the employee.

! 5. Repair and Replacement

The _____ shall repair or replace PPE as needed to maintain its effectiveness, at no cost to the employee.

If a garment ispenetrated by blood or other potentially infectious materials the garment'shall be removed immediately or as soon as possible.

All PPE shall be removed prior to leaving the work area.

When PPE is removed i,t shall be placed in an appropriately designed area or container for storage, washing, decontamination or disposal.

6. Gloves

Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin: when performing vascular access procedures, and when handling or touching contaminated items or surfaces. Disposable (single use) gloves such as surgical or examination gloves shall not be washed or decontaminated for re-use. Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

7. Masks, Eye. Protection, and Face Shields

Masks in combination with eye protection devices, such as goggles or glasses with solid side shields; or chin length face shields, shall be wornwhenever splashes, spray,, spatter, or droplets of blood or other potentially infectious materials may be generated, and eye, nose, or mouth contamination can be reasonably anticipated.

8. Surgical caps or hoods and/or shoe covers or boots shall be worn in instances, when gross contamination can reasonably be anticipated, (e.g. autopsies, orthopaedic surgery).

D. Housekeeping, Laundry and Instrument Reprocessing

The _____ shall be maintained in a clean and sanitary condition. Cleaning schedules and methods are described in the Housekeeping Department manual.

1. Contaminated surf&es shall-be decontaminated with an appropriate disinfectant (as described in the housekeeping manual) after completion of procedures; immediately or as soon as feasible when surfaces are-overtly contaminated or after any spill of blood or-other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

A blood spill clean-up procedure shall be made available to each housekeeper.

2. Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surface, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the workshift if they may have become contaminated during the shift.

3. All bins, pails, cans, and similar receptacles intended for reuse that have a reasonable likelihood of becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

4. Broken glassware that may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means such as brush and dust pan, tongs, or forceps.

5. Reusable sharps that are contaminated with blood or other potentially infectious.. materials shall not. be stored or processed in a manner that requires employees to reach by hand into the containers wherer these sharps have been placed. All new hospital construction- and renovation shall be designed and equipped to isolate or eliminate hazards associated with. reprocessing of contaminated instruments.

6. Contaminated disposable sharps shall be discarded immediately or as soon as feasible in containers that-are disposable, closable, puncture resistant, leak proof on sides and bottom and labeled or color coded. (Please Note: a facility-specific policy on container placement should be considered.)

   During use, containers for contaminated sharps shall be easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries).

   The containers shall be maintained upright throughout use and replaced routinely and not be allowed to overfill.

   When moving containers of contaminated sharps from the area of use, the containers shall be closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

   The container shall be placed in a secondary container if leakage of the primary container is possible. The second container shall be closable, constructed to contain all contents and prevent leakage during handling, storage, and transport, or shipping. The second container shall be labeled or color coded to identify its contents.

7. Other regulated waste shall be placed in containers that are closable, constructed to contain all contents and prevent leakage of fluids during handling, storage, transportation or shipping.

   The waste must be labeled or color coded and closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

   If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second

container shall be closeable, constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping.

Note: Disposal of all regulated waste shall be in accordance with applicable regulations of the' U.S. or' State and local ordinances,.

8. Contaminated laundry shall be handled as little as possible with a minimum of agitation. Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use. Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded.

Please note: If all soiled laundry is assumed to be contaminated and if all employees recognize the hazards - associated with the handling of this material, no labeling, or color-coding is necessary.

Whenever contaminated-laundry is wet and presents a reasonable likelihood of soak-through or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

The supervisor shall ensure that employees that have contact with contaminated laundry wear protective gloves, masks, gowns, and other appropriate PPE.

Please note: If your facility ships contaminated laundry off-site to a second facility that does not utilize *Universal Precautions* in the, handling of all laundry, contaminated laundry must place such laundry in bags or containers that are labeled or color-coded.

One possible solution would be to include a requirement in the contract laundry Scope of Work requiring the laundry to utilize the equivalent of Universal Precautions.

9. Laundry facilities shall be designed and operated to minimize occupational exposure and to ensure destruction or removal of all pathogenic agents. Refer to the IHS Health Facility Planning Manual and the Indian Health Manual Part 5, Chapter 10, Housekeeping for additional information.

E. .Hepatitis B Vaccination and Post Exposure Evaluation and Follow-up

1. General

T h e _____ shall make available the hepatitis B vaccine and vaccination series. to all, employees who have occupational exposure, and post-exposure evaluation and follow-up to employees who have had an exposure incident.

The _____ shall ensure that all medical evaluation and procedures, including hepatitis B vaccine and vaccination series, post-exposure evaluation and follow-up including prophylaxis, and any routine, booster dose of hepatitis B vaccine recommended by the USPHS at a future date, are:

a, Made available at no cost to the employee;

b, Made available to the employee at a reasonable time and place, e.g., during normal work hours;

C. Performed by or under the supervision of a licensed physician or by or under the supervision of another licensed healthcare professional; and

d. Provided according to recommendations of the USPHS.

The IHS facility shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

Please note:, Each facility must identify person(s) responsible for implementing vaccination, medical evaluation, and follow-up procedures.

2. Hepatitis B Vaccination

Hepatitis B vaccination shall be made available to any employee who may have occupational exposure unless that employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons, The vaccine shall. be administered after the employee has received training in this Exposure Control Plan and within 10 working days of initial assignment.

The _____ shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the _____ shall make available hepatitis B vaccination at that time.

All employees who decline to accept hepatitis B vaccination offered by the _____shall sign the mandatory declination set forth in Appendix A.

3. Post Exposure Evaluation and Follow-up

All exposure incidents shall be reported, investigated;. and documented in accordance with the Indian Health Manual, Part 1, Chapter 9, "Occupational Health & Safety Program Management,."

Following a report of an exposure incident, the _____ shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

a. Documentation of the route of exposure, and the circumstances under which the exposure incident occurred;

b. Identification and documentation of the source individual, unless it can be established, that identification is infeasible or prohibited by state or local law;

c. The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the _____ shall establish that legally required consent cannot be obtained. 'When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

d. When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

e. Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

Collection and testing of blood for HBV and HIV serological status will omply with The following:

(1) The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained;

(2) If the employee consents to baseline blood collection, but does not give consent at that time for HIV serological testing, the sample shall be preserved for at least 90 days. -If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible;

Q. Post-exposure prophylaxis shall be offered to an employee, when medically indicated, in accordance with the _____ Area Policy. The _____ shall also provide counseling, and evaluation of reported illnesses.

4. Information Provided 'to the Healthcare Professional

The _____ shall ensure that the healthcare professional responsible for the employee's hepatitis B vaccination is provided with the following:

a. A copy of 29 CFR, 1910.1030;

b. A description of the exposed employee's duties as they relate to the exposure incident;

C. Documentation of the route of exposure and circumstances under which exposure occurred;

d. Results of the source individual's blood testing, if available: and

e. All medical records relevant to the appropriate treatment of the employee including vaccination status which are the _____ responsibility to maintain.

5. Healthcare Professional's Written Opinion

The _____ shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation. The written opinion shall contain sections on employee vaccination and post-exposure evaluation and follow-up status.

The healthcare professional'swritten opinion for hepatitis B vaccination shall be limited to whether hepatitis vaccination is indicated for an employee, and if the employee has received such vaccination, The section on post-exposure evaluation and follow-up shall be limited to the following information:

a; The employee has been informed of the results of the evaluation: and

b. The employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials that require further evaluation or treatment.

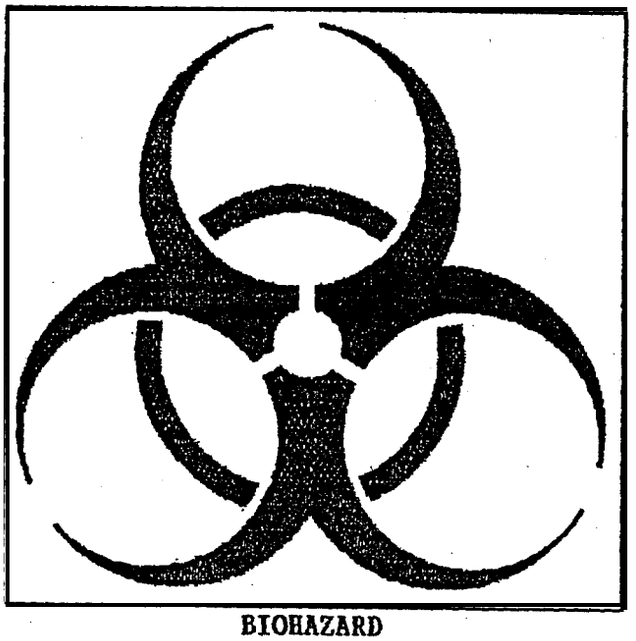
Note: All other findings or diagnosis shall remain confidential and shall not be included in the written report .

F. Communication of Hazards to Employees

1. Labels and Signs

a. Biohazard labels shall be affixed, to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious materials; and other containers used to store, transport or ship blood or other potentially infectious materials.

b. The Universal Biohazard Symbol shall be used. The symbol is fluorescent orange or orange-red. The background may, be any color that provides sufficient contrast to be clearly defined.



BIOHAZARD

C. Red bags or red containers may be substituted for 1abels. However, regulated wastes' must be handled in accordance with rules and 'regulations' of the organization having jurisdiction.

d. Products that have been released for transfusion or other clinical use are exempted from these labelling requirements.

e. Labels required for contaminated equipment shall be in accordance with this plan and shall also state which portions of the equipment remain contaminated.

2. Information and Training

-Training shall be provided at the time of assignment to tasks where occupational exposure may occur, and it shall be-repeated. annually. (Please Note: It is critical to cover these elements during new employee orientation.) It shall be tailored to the educational and language level of the employee, and offered during the, normal work shift. The training will be interactive and cover the following:

a. A copy of the standard and an explanation of its contents.

b. A discussion of the epidemiology and symptoms of bloodborne diseases.

C. An explanation of the modes of transmission of bloodborne pathogens.

d. An explanation of, the _____ Exposure Control Plan and the method of obtaining a copy.

e. The recognition of tasks that may involve exposure.

f. An explanation of the proper use and limitations of methods to prevent or reduce exposure, e.g., engineering controls, work practices and PPEs.

Q- Information on the types, use, location, removal, handling, decontamination, and disposal of PPEs.

h. An explanation of the basis of selection of PPEs.

i. Information on the hepatitis B vaccination, including efficacy, safety, method of administration, benefits, and that it will be offered free of charge.

j. Information on **the** appropriate actions to take and persons, to contact in an emergency involving blood or other potentially infectious materials.

k. An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting and medical follow-up.

1. Information ***on*** the evaluation and follow-up required after an employee exposure.

m. An explanation of the signs, labels, and color coding systems.

Employees who have received training on bloodborne pathogens in the year preceding the effective date of this policy shal1 only receive training in provisions of the policy that 'were not covered.

Additional training shall be provided to employees when any changes of tasks or procedures affect the employee's occupational exposure.

The person conducting the training shall be knowledgeable in the subject matter.

The use of a test to assess employee comprehension of subject matter is recommended for objective documentation. **(Please Note:** If **the** employee fails the test, remedial instruction is mandatory.)

G. Recordkeeping

(Please Note: Refer to the IHS Records Disposition Schedule and the **Records** Management Program for guidance on recordkeeping.)

1. Medical Records

Medical records shall be maintained in accordance with 29 CFR, 1910.20. These records shall be kept confidential, be maintained for at least the duration of employment plus 30 years, and include the following:

a. The name and social security number of the employee.

b. A copy of the employee's HBV vaccination status, including the dates of vaccination or any contraindications to vaccination.

c. A copy of all results of examinations, medical testing,+ and follow-up procedures;

d. The employer.'s copy of' the healthcare professional's written opinion.

e. .a'. copy of information provided to the healthcare professional, including a description of the employee's duties as they relate to the exposure incident, documentation of the route(s) of exposure and circumstances of the exposure, and results of the source individual's blood testing, if available.

Note: Each facility must designate an individual responsible for the maintenance of both active and inactive medical records.

2. Training Records

Training records shall be maintained for 3 years from the date of training. The following information shall be documented:

a. The dates of the training sessions.

b. An outline describing the material presented.

c. The names and qualifications of persons conducting the training.

d. The names and job titles of all persons attending the training sessions.

e. Any employee test results.

3. Availability

All employee records shall be made available to the Assistant Secretary of Labor for the Occupational Safety and Health Administration and the Director of the National Institute for Occupational Safety and Health upon request.

All employee records shall be made available to the employee or employee representative in accordance with 29 CFR, 1910.20.

4. Transfer of Records

If this facility is closed or there is no successor employer to receive and retain the records for the prescribed period, the Director of the NIOSH shall be contacted for final disposition.